

Saharan dust, transport processes, and possible impacts on hurricane activities.

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In this paper, we present observational evidence of significant relationships between Saharan dust outbreak, and African Easterly wave activities and hurricane activities. We found two dominant paths of transport of Saharan dust: a northern path, centered at 25° N associated with eastward propagating 6-19 days waves over northern Africa, and a southern path centered at 15° N, associated with the AEW, and the Atlantic ITCZ. Seasons with stronger dust outbreak from the southern path are associated with a drier atmosphere over the Maximum Development Region (MDR) and reduction in tropical cyclone and hurricane activities in the MDR. Seasons with stronger outbreak from the northern path are associated with a cooler N. Atlantic, and suppressed hurricane in the western Atlantic basin.